

Objective: To achieve end point with prototype of simple, multi-platform space weather station network for specifying radiation exposure within Geospace

- a) Observe solar max +/-6years for particle/energy flux
- b) Fly small packages on flights of opportunity early
- c) Fly main Geospace mission later

Why radiation belts?:

- a) clearer present need to characterize radiation belts
- b) currently inadequate information about nature of belts

Impact of this plan: minor change from straw-plan, increases return, lowers price, pushes interagency but not totally dependent

Support from SAT long-time scale session on radiation environment; need for specification over days/months to solar cycle time periods, including solar minimum for inner electron belts

How do we get there?

Phase 1 for Geo Observatories (long term):

- a) Small Rad Mappers' particle suite (item one of instrument list from LWS plan) as standard package, AO selected
- b) For missions of opportunity on: SDO, ISS, GPS, GEO, NPOES, Molnya, etc.
- c) Pursue ONR opportunity with free flyer as a pathfinder for regular Rad Belt mission (Phase 2 below) subsatellite(s?) carrying standard particle package into Geo-transfer orbit
- d) Remote imaging auroral/ENA for ionosphere and magnetosphere

Phase 2 for Geo Observatories (rad belt process):

- a) Change Rad Belt Mappers to one petal orbit coverage, satellite/subsatellite spread throughout Geo-transfer orbit or at various L-shells which would disperse.
- b) Ionosphere: no solution yet aside from imaging; CNOFS/SCINDI good start/approach